

## CHAPTER 3: PRELIMINARY RESULTS FROM THE MARCH 2002 ADMINISTRATION

### Introduction

The legislation establishing the CAHSEE called for the first operational forms of the exam to be administered in spring 2001 to 9<sup>th</sup> graders in the Class of 2004. At the first administration 9<sup>th</sup> graders could volunteer, but were not required, to take both portions of the exam. Students who did not pass the exam in that administration were required to take the exam as 10<sup>th</sup> graders in spring 2002. Our analyses of results from the March and May 2001 administrations were reported to the legislature, Governor, Board, and Department earlier this year (Wise et al., Feb. 2002).

In March and May 2002, the CAHSEE was administered again, this time to 10<sup>th</sup> graders. This chapter describes preliminary analyses of results from these administrations that we were able to conduct during Year 3 of the evaluation. Data from the May administration were not yet available during Year 3 as hand scoring of the essays was still in progress. In addition, schools have received results from the March administration and are in the process of verifying demographic information on the students who were tested at that time. The information presented here is necessarily preliminary. Nonetheless, it is hoped that results from these analyses, albeit incomplete, will be useful at this time as schools continue to refine and implement programs to help students master the skills covered by the CAHSEE.

In all, just over 250,000 students took one or both parts of the CAHSEE in March 2002. These students should not be directly compared to the more than 380,000 students who took the CAHSEE as 9<sup>th</sup> graders. Students who passed the CAHSEE in 2001 did not participate (with minor exceptions) in the March 2002 testing. In addition, the 2001 examinees were volunteers who were therefore not a fully representative sample of all students in the Class of 2004. While this year's examinees are now 10<sup>th</sup> graders, the exclusion of everyone who has already passed the exam suggests that score levels for the remaining examinees would, on average, be lower.

In nearly all of the analyses described here, we have divided the March 2002 examinees into two distinct samples. The first sample is students who did not participate in the 2001 testing and were thus taking the CAHSEE for the first time. The second is students who did test in 2001, but did not pass one or both parts of the CAHSEE. The first group completes the information on passing rates for students taking the exam for the first time. With the second group we can begin to see how effective schools have been in helping students who do not initially pass the exam.

One other important difference between this year's cohort of examinees and those tested last year is that not all of last year's 9<sup>th</sup> graders are currently in the 10<sup>th</sup> grade. Table 3.1 shows 10<sup>th</sup> grade enrollment figures compared to the prior year's 9<sup>th</sup> grade enrollments for each of the last several years. Roughly 26,000 of the 2001 9<sup>th</sup> graders did not complete sufficient coursework to be counted as 10<sup>th</sup> graders or dropped out altogether. In addition, some students, including some who passed the CAHSEE as 9<sup>th</sup> graders, migrated out of the state, while other students who had not yet had the chance to take the CAHSEE migrated in.

Note that the size of the drop in enrollment between 9<sup>th</sup> and 10<sup>th</sup> grade has not changed significantly over the last several years. *So far, there is no evidence for higher retention or dropout rates for the Class of 2004 that might be attributed to the CAHSEE requirement.*

**TABLE 3.1 Enrollment Declines from 9th to 10th Grade**

School Year	10 <sup>th</sup> Grade Enrollment	Prior Year's 9 <sup>th</sup> Grade Enrollment	Decrease	
			Number	Percent
2001–2002	459,588	485,910	-26,322	-5.4%
2000–2001	455,134	482,270	-27,136	-5.6%
1999–2000	444,064	468,162	-24,098	-5.2%
1998–1999	433,528	458,650	-25,122	-5.5%
1997–1998	423,865	450,820	-26,955	-6.0%

\* Source: California Basic Educational Data System (CBEDS)

### Who Passed?

A major charge for our evaluation is to analyze and report performance on the CAHSEE for all students and for specific demographic groups, including economically disadvantaged students, English learners (EL), and students with disabilities (characterized as “exceptional needs students” in the legislation). Tables 3.2 and 3.3 show the passing rates for each of these groups and also by gender and ethnicity.

**TABLE 3.2 Passing Rates\* by Demographic Group—English-language Arts**

Group	March and May 2001			March 2002		
	All Students Tested		First Time Test Takers	Repeat Test Takers**		
	Number of students tested	Percentage Passing	Number of	Percentage Passing	Number of students tested	Percentage Passing
			students tested			
All	369,387	64.1%	92,614	64.5%	76,536	41.8%
Females	180,680	71.0%	42,196	70.4%	30,836	43.8%
Males	188,239	57.5%	49,968	59.7%	45,505	40.4%
Asian	31,242	76.3%	7,600	71.4%	5,248	43.9%
African American	29,947	49.6%	8,856	53.1%	7,697	38.9%
Hispanic	150,369	47.9%	35,712	48.3%	43,326	37.2%
Caucasian	136,108	81.5%	33,664	83.3%	15,710	53.9%
Economically Disadvantaged	118,680	45.4%	29,700	45.0%	37,377	36.0%
English learners	64,962	29.9%	17,406	28.2%	27,009	27.8%
Redesignated fluent English proficient	33,100	61.6%	5,349	77.5%	6,929	58.8%
Students with disabilities	35,957	22.8%	10,783	29.4%	15,023	20.6%

\* Preliminary results prior to final edits. A small number of students receiving modifications that will invalidate their scores are included here.

\*\* Identification of repeat test takers is based on students' self report.

TABLE 3.3 Passing Rates\* by Demographic Group—Mathematics

Group	March and May 2001		March 2002			
	All Students Tested		First Time Test Takers		Repeat Test Takers**	
	Number of students tested	Percent Passing	Number of students tested	Percent Passing	Number of students tested	Percent Passing
All	364,664	44.4%	105,073	41.8%	129,055	24.6%
Females	178,370	43.1%	48,764	41.3%	66,778	24.2%
Males	185,818	45.8%	55,649	42.4%	61,867	25.0%
Asian	31,435	70.2%	7,732	69.4%	6,997	37.7%
African American	29,442	24.3%	10,123	22.6%	12,983	17.2%
Hispanic	148,176	25.2%	41,274	23.6%	67,796	20.0%
Caucasian	133,874	63.6%	37,960	61.7%	33,014	33.1%
Economically disadvantaged	116,898	25.7%	33,663	23.8%	54,864	20.5%
English learners	64,746	16.6%	19,285	20.4%	32,326	15.8%
Redesignated fluent English proficient	32,124	40.6%	6,033	46.2%	14,022	30.7%
Students with disabilities	35,177	12.8%	12,141	12.6%	17,162	8.0%

\* Preliminary results prior to final edits. A small number of students receiving modifications that will invalidate their scores are included here.

\*\* Identification of repeat test takers is based on students' self report.

Note that the number tested and passing rates for specific demographic groups may change slightly as corrections to the demographic codes for specific students are received from schools. Demographic information is missing for a small number of students (which is why the total number of students is greater than the sum of the number of females and the number of males). The division of March 2002 examinees into first-time and repeat test takers is also subject to revision. The breakout shown above treats students who did not report whether they took the March 2001 examination as first-time test takers. Subsequent analyses described below indicate that some of these students did participate in the 2001 testing. Since California does not have a system of records on individual students, it is not possible to track student progress from one year to the next with complete precision.

For ELA, the number of repeat test takers is less than the number of first-time test takers; for math the reverse is true. This difference is a direct result of the higher passing rates for the ELA exam in 2001 (64 percent for ELA compared to 44 percent for math). It is less clear why the number of first-time test takers was greater for the math test, as presumably all students who had not tested previously would take both parts. The difference may, in part, result from uncertainty about students who did not report their prior testing experience. Some of these students, who are all treated here as first-time test takers, had already passed the ELA portion of the CAHSEE and so only needed to take the math portion of the exam.

*The first conclusion we are able to draw from examining the passing rates for the March 2002 administration of the CAHSEE is that the rates for first-time test takers were very similar to the passing rates for 2001. One might have hoped that, with an additional year of schooling, passing rates would be higher for students waiting until the 10<sup>th</sup> grade to take the exam. It is not possible to estimate effects of additional coursework from these data, because the decision to take the CAHSEE in the 9<sup>th</sup> grade was likely related to student achievement levels. Higher achieving students may have been somewhat more likely to test voluntarily as 9<sup>th</sup> graders. Thus, the extra year of schooling is offset to an unknown degree by differences in 9<sup>th</sup> grade achievement levels of students tested in 2001 versus those who waited until 2002 to take the CAHSEE. The results here do suggest that, had all students in the Class of 2004 taken the CAHSEE at one time, the passing rates would likely have been close to the rates reported for the 2001 examinees, overall and by demographic group.*

The second notable result is that the passing rates for repeat test takers were much lower than for first-time test takers. More importantly, the passing rates for these particular repeat test takers were much higher this year than in 2001. All of them failed the indicated portion of the exam last year, so last year's passing rate was 0 percent for this group. More than 40 percent of the students who initially failed the ELA test have now passed the ELA requirement. If similar progress can be made over the next two years, remediation efforts should be successful in helping virtually all students to pass this requirement by the time of their graduation in 2004.

For mathematics, one quarter of the students who initially failed have now passed the exam. The rate of conversion from not passed to pass must increase in subsequent years if all students are to reach proficiency by the end of the 12<sup>th</sup> grade. Note that schools did not receive 2001 results until September and so were not able to target students for remediation over the summer following their 9<sup>th</sup> grade. The March 2002 results were returned to schools in May, prior to summer sessions. It is plausible to expect greater gains in 2003 if significant numbers of students needing assistance participate in effective summer remediation programs.

Conversion rates for repeat test takers, from "not pass" to "pass," were significantly lower for some groups of students, particularly for English learners and students with disabilities. Only 20 percent of repeat test takers with disabilities passed the ELA portion and only 8 percent passed the Math portion. It is clear that significant numbers of these students will be unable to satisfy the CAHSEE requirement by the end of 12<sup>th</sup> grade unless the effectiveness of their remediation efforts improves dramatically. Note that conversion rates for students who are "redesignated fluent English proficient" were among the highest, both for ELA and for math. There is thus reason to expect the current English learners will eventually pass the CAHSEE if they can first achieve proficiency in English.

Conversion rates for African American and Hispanic students were only slightly lower than conversion rates for other students, even though there was a bigger difference in initial passing rates. One exception is that the conversion rate for African-American students in mathematics was only 17 percent compared to 25 percent overall.

We also analyzed passing rates in mathematics for students at different levels of coursework. Table 3.4 shows passing rates for first-time and repeat test takers by the highest-level mathematics course that they have completed or are currently enrolled in.

TABLE 3.4 March 2002 Math Passing Rates by Prior Test Status and Highest Math Course Taken

Highest Math Course Taken	First-Time Test Takers		Repeat Test Takers	
	Number of students tested	Percent Passing	Number of students tested	Percent Passing
General Math	6,577	9.3%	5,981	8.2%
Pre-Algebra	15,710	22.9%	20,222	16.3%
Algebra	33,720	30.1%	50,665	21.9%
Geometry	21,731	69.5%	29,661	36.4%
Algebra II	10,669	85.0%	6,040	45.9%
Advanced Math	1,059	95.9%	163	54.6%
Integrated Math I	1,579	38.4%	1,380	21.4%
Integrated Math II	2,129	72.1%	2,607	36.8%
Unknown	11,899	18.3%	12,336	15.8%
Total	105,073	41.8%	129,055	24.6%

As in 2001, passing rates are considerably higher for students who have completed higher levels of coursework. Passing rates for first-time test takers who are currently enrolled in Geometry, Algebra II, Advanced Math, or the second year of an Integrated Math series are quite high, 70 percent or better, compared to 42 percent overall. Note, however, that conversion rates for repeat test takers do not rise much above 50 percent, even for students enrolled in the most advanced level courses. Coursework breakouts are based on self-reports by students. Low conversion rates for students in advanced courses could result, in part, from misreporting of coursework status, but it is also likely that some students go on to higher level courses without fully mastering more basic mathematics content standards. Additional remedial work focused on the standards for earlier grades may be needed for these students, as work in the higher-level courses alone has not been entirely successful in bringing them to mastery of the CAHSEE content standards.

### Who Has Completed the CAHSEE Graduation Requirement?

In addition to comparisons of passing rates for various demographic groups who took the exam, another important consideration is an assessment of how many students in the Class of 2004 have now completed the graduation requirement to pass both parts of the CAHSEE. Table 3.5 lists the total enrollments of 9<sup>th</sup> graders, and the number and percentage who had passed one or both parts of the exam after the 2001 testing and the corresponding numbers after the March 2002 results are included. The estimated proportions passing each part of the exam, before and after the March 2002 administration, are also illustrated in Figures 3.1 and 3.2.

TABLE 3.5 Number of Students Completing the CAHSEE Requirement\*

Status	After 2001		After March 2002	
	Number of students	Percent of all 2001 9 <sup>th</sup> Grade students	Estimated Number of students	Percent of all 2001 9 <sup>th</sup> Grade students
Passed Both	145,442	29.9%	216,161	44.5%
Passed only ELA	91,335	18.8%	111,013	22.8%
Passed only Math	16,469	3.4%	19,276	4.0%
Passed neither	136,155	28.0%	139,460	28.7%
Not yet Tested	96,509	19.9%	**	**
Total	485,910	100.0%	485,910	100.0%

\* Estimates pending data verification and correction.

\*\* The number of students not yet tested cannot be estimated with any accuracy due to uncertainty as to exactly how many the March 2002 examinees had tested previously.

CAHSEE Status After 2001 Administration

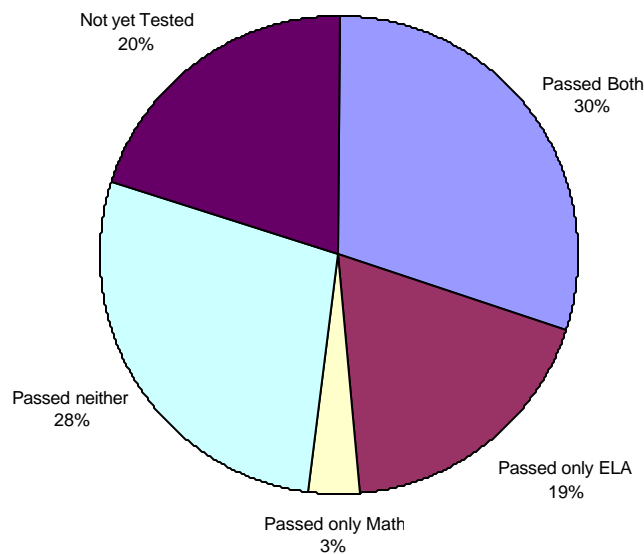
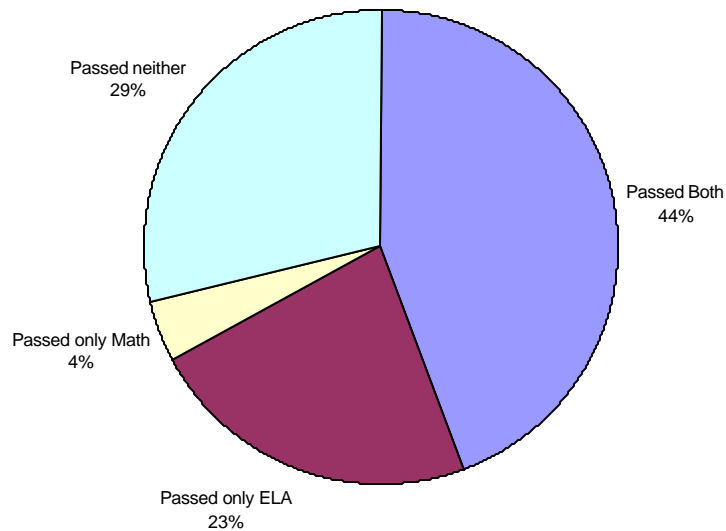


Figure 3.1. CAHSEE Results After 2001 Testing.

**CAHSEE Status After March 2002 Administration**



**Figure 3.2.** Estimated CAHSEE Results After March 2002 Testing.

After the 2001 administrations roughly 30 percent of the Class of 2004 had passed both portions of the CAHSEE, and completed this graduation requirement. Another 15 percent completed this requirement in the March 2002 administration. There are several issues yet to be resolved in the computation of cumulative passing rates. First, as noted above, if the Class of 2004 is now defined in terms of current 10<sup>th</sup> graders, the total number in this class is about 26,000 less than the number of students enrolled as 9<sup>th</sup> graders last year. Under this definition, approximately 47 percent of the current Class of 2004 has completed the CAHSEE requirement. There is also some uncertainty in the denominator in computing the cumulative percentages. Some of the students who passed last year may have dropped out, been retained as 9<sup>th</sup> graders, or left the state. These students are not counted in the current 10<sup>th</sup> grade enrollment and so should be excluded from the counts of those who have passed. Unfortunately, we have no solid basis for estimating the number of such students. In addition, cumulative results for some repeat test takers were based on their self-report of the portions of the exam, if any, they passed in 2001. As described below, self-reports of 2001 test status were reasonably, but not completely accurate. Notwithstanding these constraints, the above estimates are the best we could do without a more comprehensive statewide student data system.

Cumulative passing rates for different demographic groups are also of high interest. Given uncertainty in the computation of these rates, we have chosen to wait until results from the May 2002 administration are available and schools have completed verification of the demographic status of their students before computing cumulative results for these groups.



### School-Level Passing Rates

A key question is the extent of variation in passing rates by school. If relatively few students from a particular school pass the exam, there is reason to believe that somewhere along the way these students have not had the opportunity to learn either the material covered by the test or, even more likely, to learn key prerequisite skills taught at lower grades. Conversely, if most students in a school do pass the exam, there is good reason to believe that students at that school did have adequate opportunity to learn the required material. Tables 3.6 through 3.9 below show the number of schools where very few (less than 20 percent) of the students tested received passing scores through the number of schools with very high passing rates (at least 80 percent). Results are shown separately for first-time and repeat test takers and for ELA and mathematics.

In each table, counts of schools with low and high passing rates are shown separately by the number of students tested. Where fewer than 10 students were tested, very low or high passing rates are not surprising and may be solely a function of the particular students being tested. Where 100 or more students were tested, low or high passing rates are considerably more significant.

For the most part, school-level passing rates reflect the individual student passing rates described above. Relatively few schools had low passing rates for students taking ELA for the first time. Most schools had low passing rates for students repeating the mathematics test. When data from the May 2002 administration are also available, we will conduct further analyses of the types of schools exhibiting significantly low or high passing rates for each test.

TABLE 3.6 ELA Student Pass Rates by Number of Students Tested at Each School for First Time Test Takers

Percent of Students Passing	Number of Students Tested per School									
	Fewer than 10		10 to 99		100 to 399		More than 400		Total	
	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools
Very Low (< 19%)	148	21.2%	39	4.0%	1	0.6%	0	0.0%	188	10.0%
Low (20% - 39%)	103	14.8%	178	18.2%	20	12.3%	2	4.8%	303	16.1%
Moderate (40% - 59%)	150	21.5%	348	35.7%	46	28.4%	8	19.0%	552	29.4%
High (60% - 79%)	101	14.5%	278	28.5%	40	24.7%	10	23.8%	429	22.8%
Very High (> 80%)	196	28.1%	133	13.6%	55	34.0%	22	52.4%	406	21.6%
Total*	698	100%	976	100%	162	100%	42	100%	1,878	100%

\*Note: With rounding may sum to more than 100%



**TABLE 3.7 ELA Student Pass Rates by Number of Students Tested at Each School for Repeat Test Takers**

Percentage of Students Passing	Number of Students Tested per School									
	Fewer than 10		10 to 99		100 to 399		More than 400		Total	
	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools
Very Low (< 19%)	233	31.9%	35	5.8%	2	0.7%	0	0.0%	270	16.7%
Low (20%–39%)	121	16.6%	188	31.4%	133	47.2%	3	60.0%	445	27.5%
Moderate (40%–59%)	149	20.4%	264	44.1%	134	47.5%	1	20.0%	548	33.9%
High (60%–79%)	81	11.1%	98	16.4%	13	4.6%	1	20.0%	193	11.9%
Very High (> 80%)	146	20.0%	14	2.3%	0	0.0%	0	0.0%	160	9.9%
Total	730	100%	599	100%	282	100%	5	100%	1,616	100%

\*Note: With rounding may sum to more than 100%

**TABLE 3.8 Math Student Pass Rates by Number of Students Tested at Each School for First Time Test Takers**

Percent of Students passing	Number of Students Tested per School									
	Fewer than 10		10 to 99		100 to 399		More than 400		Total	
	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools
Very Low (< 19%)	358	54.7%	367	37.8%	47	21.4%	4	9.1%	776	41.1%
Low (20%–39%)	120	18.3%	324	33.4%	83	37.7%	9	20.5%	536	28.4%
Moderate (40%–59%)	83	12.7%	196	20.2%	39	17.7%	9	20.5%	327	17.3%
High (60%–79%)	36	5.5%	66	6.8%	28	12.7%	15	34.1%	145	7.7%
Very High (> 80%)	57	8.7%	18	1.9%	23	10.5%	7	15.9%	105	5.6%
Total	654	100%	971	100%	220	100%	44	100%	1,889	100%

\*Note: With rounding may sum to more than 100%

TABLE 3.9 Math Student Pass Rates by Number of Students Tested at Each School for Repeat Test Takers

Percent of Students passing	Number of Students Tested per School									
	Fewer than 10		10 to 99		100 to 399		More than 400		Total	
	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools	Number of Schools	Percent of Schools
Very Low (< 19%)	445	67.7%	231	44.7%	113	24.4%	13	41.9%	802	48.1%
Low (20%–39%)	100	15.2%	196	37.9%	320	69.1%	18	58.1%	634	38.0%
Moderate (40%–59%)	65	9.9%	78	15.1%	29	6.3%	0	0.0%	172	10.3%
High (60%–79%)	9	1.4%	10	1.9%	1	0.2%	0	0.0%	20	1.2%
Very High (> 80%)	38	5.8%	2	0.4%	0	0.0%	0	0.0%	40	2.4%
Total	657	100%	517	100%	463	100%	31	100%	1,668	100%

\*Note: With rounding may sum to more than 100%

### Improvement for Repeat Test Takers

A key question is how much students who did not initially pass in 2001 have improved. Passing rates for repeat test takers tell part of this story, but we would also like to know how much closer to the passing level students are after an additional year of instruction. A reporting scale was established with the 2001 administration ranging from 250 to 450, with the passing level set to 350 for each exam. We would like to know the extent to which students who did not pass the exam again in 2002 are at least closer to reaching the required passing level.

To analyze score improvement, we constructed a data file containing information on 135,886 of the March 2002 examinees for whom 2001 test results could be matched. We matched student records from the 2002 administration to records on the 2001 data file on the basis of school code, student name, and birth date. Two additional rounds of matches were conducted to match students with minor differences in the coding of their names across the two years. Tables 3.10 and 3.11 show the percent of cases matched as a function of students' self-report of their 2001 testing status.

TABLE 3.10 Percent of March 2002 Examinees with Matching 2001 Data—ELA

Student Report of 2001 Test Status	Number of March 2002 Examinees	Percent Matched	Percent of Matches Who Passed in 2001
Did not take the ELA test	93,990	3.6%	33.5%
Took, but did not pass	85,045	78.8%	6.3%
Took and passed	59,534	85.9%	98.6%
Unknown	13,704	49.9%	43.2%
TOTAL	252,273	50.9%	46.3%

Note: Nearly all students who previously passed the ELA test did not retake that portion of the CAHSEE. (Six percent of the students who took the ELA portion of the CAHSEE in 2002 incorrectly indicated they had not passed it in 2001.)

**TABLE 3.11 Percent of March 2002 Examinees with Matching 2001 Data—Mathematics**

Student Report of 2001 Test Status	Number of March 2002 Examinees	Percent Matched	Percent of Matches Who Passed in 2001
Did not take the Math test	94,184	3.9%	12.1%
Took, but did not pass	127,032	81.9%	0.6%
Took and passed	14,286	82.7%	67.7%
Unknown	16,771	46.3%	8.8%
TOTAL	252,273	50.5%	7.7%

Overall, matches were found for about 80 percent of the students who reported having taken the corresponding test in 2001. It is likely that most of the remaining students had 2001 records that were not easily matched due to changes in school or differences in how their names or birth dates were coded across the two years. Correspondingly, matches were found for fewer than 4 percent of the students who reported not having tested previously. Matches were found for approximately half of the students who did not report their 2001 testing status.

For ELA, student reports of whether they passed the 2001 test were reasonably accurate, although 6 percent of the students who reported not passing were matched to records with passing scores. For mathematics, only two-thirds of the students who reported having passed were matched to records with passing scores. Note, however, that the total number who reported passing in 2001 was relatively low.

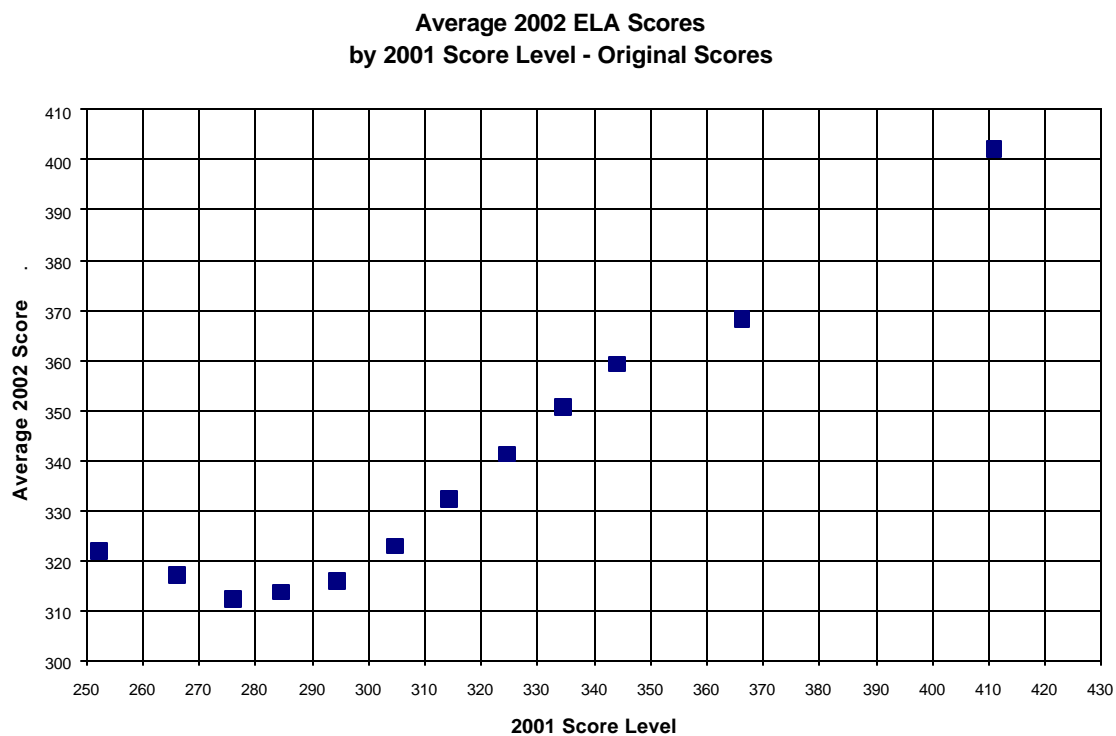
Tables 3.12 and 3.13 show average 2002 test scores for students at different 2001 score levels. These results are also illustrated in Figures 3.3 and 3.4. The results show a significant discontinuity. For students with 2001 scores at or above 300, there was a close correspondence between the 2001 scores and average 2002 scores. For students with 2001 scores below 300 there was essentially no relationship between scores on the 2001 and 2002 exams.

TABLE 3.12 Average 2002 Score Level by 2001 Score Level—English Language Arts Using Official Scale Scores Reported to Students

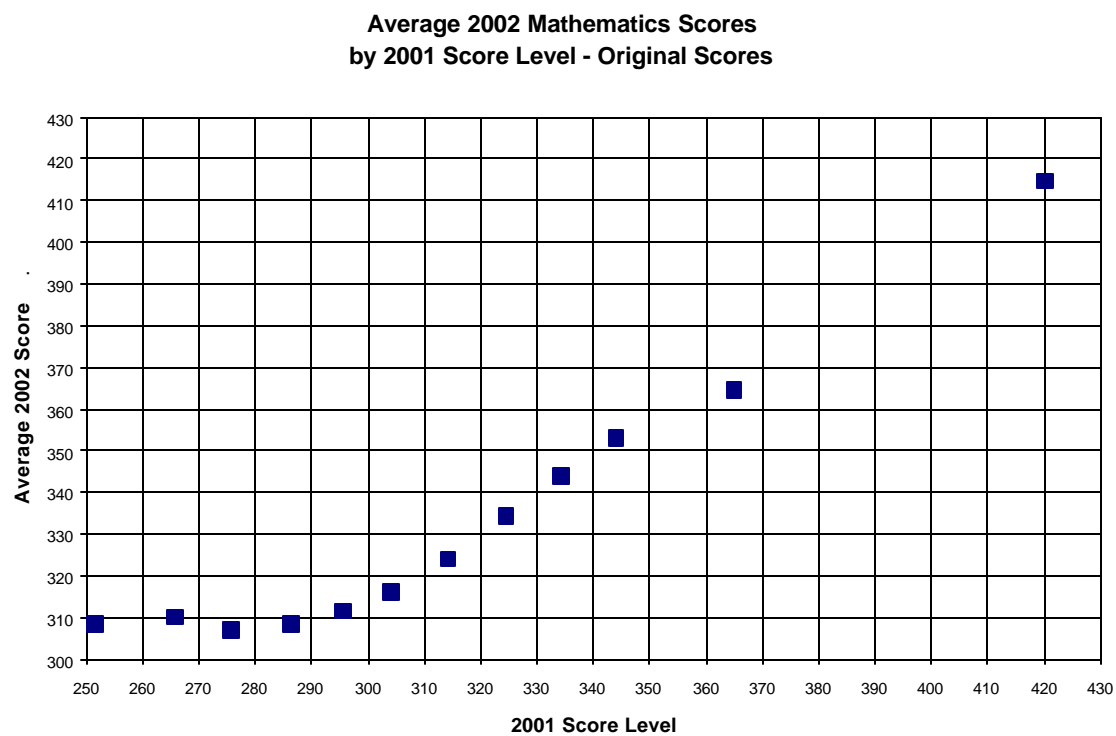
2001 Score Level	ELA			
	N	Percent Pass 2002	Mean	Mean Gain
Unknown	6,770	67.2%		
250–259	250	16.8%	321.8	69.6
260–269	122	13.1%	317.0	51.0
270–279	494	7.9%	312.4	36.5
280–289	943	8.1%	313.6	29.2
290–299	2,683	8.6%	315.8	21.5
300–309	5,168	12.9%	322.8	18.2
310–319	8,897	20.1%	332.2	17.6
320–329	12,992	31.7%	341.4	16.7
330–339	15,243	50.4%	350.5	16.1
340–349	17,016	71.1%	359.2	15.0
350–399	782	82.9%	368.7	2.5
400–450	56	98.2%	402.2	-8.8
250–299 Recoded to 300*	4,492	9.0%	318.0	19.0

TABLE 3.13 Average 2002 Score Level by 2001 Score Level—Mathematics Using Official Scale Scores Reported to Students

2001 Score Level	Math			
	N	Percent Pass 2002	Mean	Mean Gain
Unknown	8,349	45.0%		
250–259	75	6.7%	308.4	57.0
260–269	118	3.4%	310.1	44.4
270–279	276	1.5%	307.1	31.5
280–289	2,324	1.6%	308.4	22.1
290–299	5,310	1.9%	311.6	16.1
300–309	13,225	2.7%	316	11.9
310–319	22,159	6.2%	324	9.9
320–329	23,816	17.0%	334.3	9.9
330–339	24,179	36.3%	343.8	9.7
340–349	23,886	60.8%	353.1	9.2
350–399	470	75.5%	365.1	0.15
400–450	29	86.2%	414.7	-5.4
250–299 Recoded to 300*	8,103	1.8%	312.6	13.6



**Figure 3.3.** Average 2002 ELA Score by 2001 ELA Score Level—Original Coding.

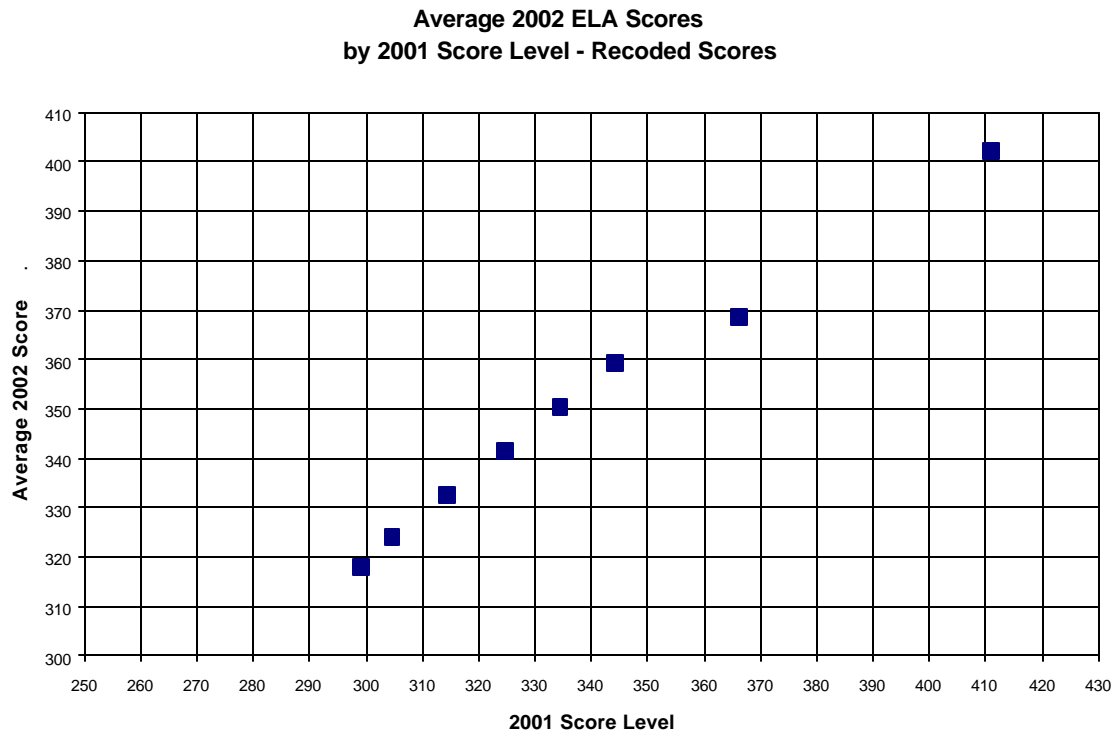


**Figure 3.4.** Average 2002 Mathematics Score by 2001 Score Level—Original Coding.

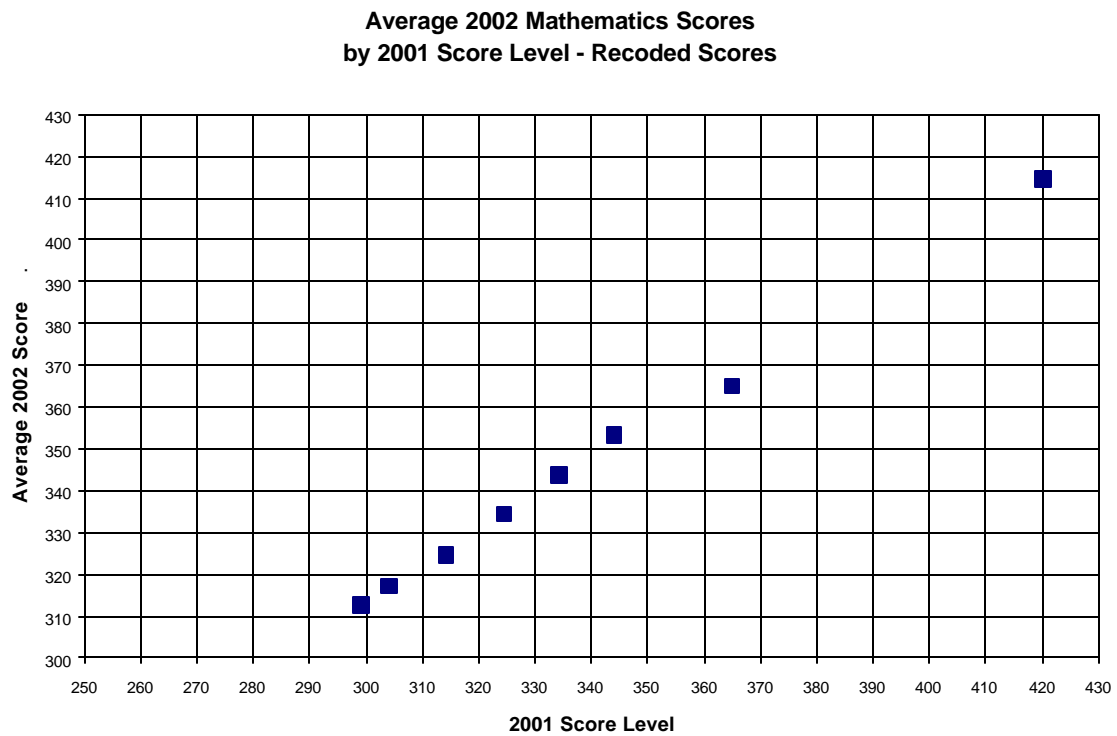
While dramatic, this result should not be surprising. Students who guess randomly will, on average, receive a score of 300. For example, the mathematics test includes 80 multiple-choice questions, each with four possible choices. With random guessing, students will generate correct answers to about a quarter, or 20 of the 80 questions. A score of 20 correct on the base (March 2001) test form translates to a scale score of 300. The most likely explanation for students with fewer than 20 correct answers on this exam is that they were unlucky in their guesses. (There were relatively few omitted responses, suggesting that students who did not know the correct answer were likely to at least guess.) A similar result applies to ELA, using the assumption that a score of 1 on the essays corresponds to no real knowledge.

Apparently, bad luck (scoring below the guessing level) did not replicate for any given student in the 2002 testing. Students scoring well below 300 in 2001 were **not** more likely to score below 300 in 2002 than students who scored at the 300 level in 2001.

In analyzing score gains, we adjusted both the 2001 and 2002 scores by recoding all scores below 300 to 299. Figures 3.5 and 3.6 show the relation of 2001 and 2002 scores after this adjustment. With this adjustment, there is a consistent relationship between the 2002 and 2001 scores. Average score gains were consistently about 17 points for ELA and 10 points for mathematics, regardless of where students started from in 2001. Note that if scores below 300 were not recoded, average gains for students in the 250–260 range would be as much as 50 points higher, significantly distorting analyses of average gains. In addition, the variation in gains would be much larger as some students would show significant declines to levels well below 300 in 2002.



**Figure 3.5.** Average 2002 ELA Score by 2001 ELA Score Level—Revised Coding.



**Figure 3.6.** Average 2002 Mathematics Score by 2001 Score Level—Revised Coding.



Tables 3.14 and 3.15 show average 2001 score levels and 2001 to 2002 gains for different demographic groups using the adjusted scores. While some groups started from lower levels, average gains were relatively similar for different groups. Average gains in mathematics were somewhat lower for African Americans (8.2 points versus 10.5 overall). Not surprisingly, gains in ELA were somewhat lower for English learners (13.0 compared to 16.6 overall), but gains for students redesignated as fluent in English were significantly higher (21.7).

TABLE 3.14 Average 2001 Score Levels and Average 2002 Score Improvements by Demographic Group—English-language Arts

Group	Number of Students Successfully Matched	2001 Score		Gain Score	
		Average	Standard Deviation	Average	Standard Deviation
All	63,808	327.3	14.8	16.7	19.7
Females	23,912	329.0	14.3	16.4	19.4
Males	35,648	326.7	14.8	16.8	19.6
Asian	4,446	329.1	14.1	17.8	19.1
African American	5,943	326.3	15.1	16.1	19.7
Hispanic	36,947	326.2	14.9	15.2	18.8
Caucasian	12,752	330.0	14.2	20.8	21.6
Economically disadvantaged	31,568	325.6	15.0	15.4	19.0
English learners	23,641	323.6	15.0	13.0	17.3
Redesignated fluent English proficient	5,997	332.2	12.7	22.0	19.9
Students with disabilities	12,986	319.7	14.9	11.1	18.1

Note. Demographic information was unavailable for some examinees; therefore not all categories sum to the total number of examinees.

TABLE 3.15 Average 2001 Score Levels and Average 2002 Score Improvements by Demographic Group—Mathematics

Group	Number of Students Successfully Matched	2001 Score		Gain Score	
		Average	Standard Deviation	Average	Standard Deviation
All	115,368	324.4	14.8	10.5	15.8
Females	59,540	324.6	14.7	10.7	14.9
Males	53,508	324.3	15.0	10.4	16.6
Asian	6,162	327.6	14.3	15.4	16.5
African American	10,997	321.7	15.0	8.2	14.8
Hispanic	61,137	322.2	14.6	9.9	15.4
Caucasian	29,315	329.0	14.1	11.3	16.3
Economically disadvantaged	48,651	321.8	14.8	10.4	15.6
English learners	29,223	318.5	14.2	10.3	16.0
Redesignated fluent English proficient	12,768	327.1	13.8	12.3	15.0
Students with disabilities	15,189	314.3	13.7	5.6	15.4

Note. Demographic information was unavailable for some examinees; therefore not all categories sum to the total number of examinees.

The most striking difference in average gain in scores is for students with disabilities. These students start at much lower average levels (320 in ELA and 314 in mathematics compared to 327 and 325 overall) and also gain less (11.1 scale points for ELA and 5.6 for mathematics compared to 16.6 and 10.5 respectively overall).

### Summary

Results from the 2002 CAHSEE administration are summarized above. Overall, 64 percent of the students taking the ELA test passed and 44 percent of the students taking the mathematics test passed. We estimate that 42 percent of the students taking both exams passed both, although there is a small amount of uncertainty about this number due to problems in matching students' ELA and mathematics results. Passing rates were considerably lower for economically disadvantaged students (22.7 percent overall) and particularly for English learners (11.9 percent) and students with disabilities (10.3 percent) passing both parts. Overall we estimate that about 30 percent of the Class of 2004 took and passed both parts of the CAHSEE. Only about 6–8 percent of the English-learners and students with disabilities have completed the requirements, as fewer of these students took the exam and fewer of those who took it passed.

Two factors were significantly related to the passing rates. For the ELA test, students who had been English learners but were reclassified as proficient in English passed the exam at relatively high rates in comparison to students classified as English learners. Again, there

is a small amount of uncertainty about these estimates due to data coding problems that were being corrected by American Institutes for Research (AIR) and CDE. For the mathematics test, completing Algebra I was significantly related to the passing rates. We also examined the consistency between scores on the essay and multiple-choice portions of the ELA test and found that relatively few students passed who did not have moderate to high scores on both parts.

Our analyses of test score accuracy indicated that a modest number of students were too near the cutoff to classify accurately. For students significantly below or above the cutoff, classification was quite accurate. The zone of uncertainty was modest for the ELA test and much narrower for the mathematics test.

Passing rates for students taking the CAHSEE for the first time were very similar to passing rates for the 9<sup>th</sup> graders who took the CAHSEE in 2001. Overall, 65 percent of first-time test takers passed the ELA portion of the CAHSEE while 44 percent of those taking the mathematics portion for the first time passed it. Passing rates for different demographic groups also matched the 2001 passing rates closely.

Roughly half of the students tested in March 2002 were making a second attempt to pass. A significant proportion (42 percent) of the students who did not pass on the first try have now passed the ELA part of the CAHSEE. The proportion of students converted from not passing to passing the mathematics portion of the test was lower (25 percent), but still a sizeable number. Cumulative success rates were significantly lower for students with disabilities and, in mathematics, for African American students and English learners.

ELA passing rates for English learners who had been redesignated as fluent English proficient were comparable to other student groups, raising hope that the lower passing rates for English learners will be erased once they achieve English proficiency. For math, passing levels were closely related to level of coursework completed.

With the exception of students with disabilities, average score gains were relatively consistent across demographic groups—about 17 points for ELA and 10 points for mathematics.